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Some of the more visible efforts, activities, and results which have taken place among the small schools of Nevada during the initial phase (1962-65) of the Western States Small Schools Project are described. These activities, dealing with the problems and concerns of small schools, include workshops, supervised correspondence and programed instruction, multiple-class teaching, and flexible scheduling. A bibliography of publications written by David L. Jesser, Director, Nevada Western States Small Schools Project, concludes the document. (SW)

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WESTERN STATES SMALL SCHOOLS PROJECT

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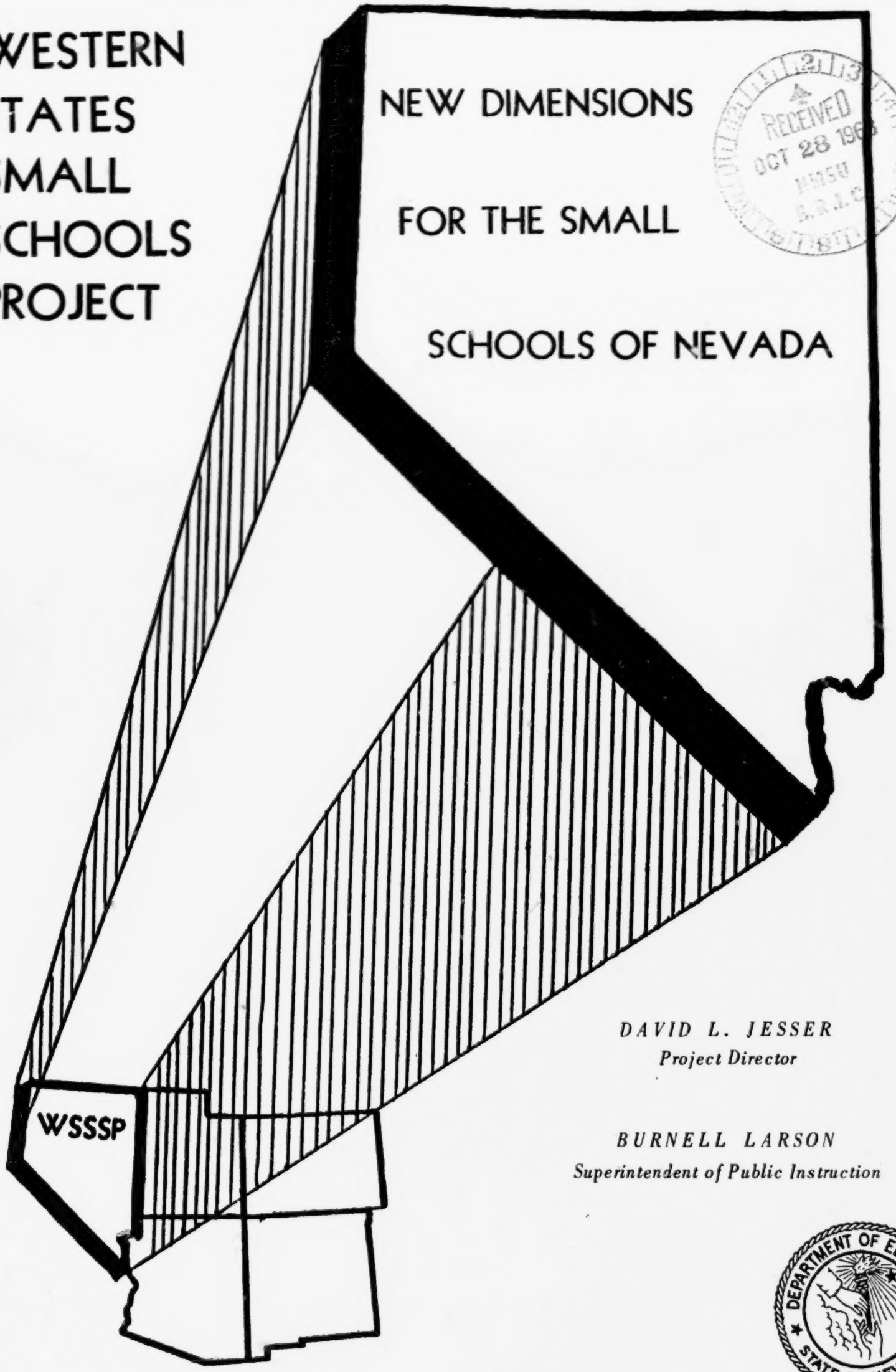
NEW DIMENSIONS FOR THE SMALL SCHOOLS OF NEVADA



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Project Director

BURNELL LARSON
Superintendent of Public Instruction

DEPARTMENT OF EDUCATION
STATE OF NEVADA

RC003061

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NEW DIMENSIONS FOR THE SMALL SCHOOLS OF NEVADA

A REPORT

OF

THE WESTERN STATES SMALL SCHOOLS PROJECT

FOR

NEVADA

(January 1, 1962 - August 31, 1965)

David L. Jesser, Director

Carson City, Nevada

December 1966

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FOREWORD

As the Western States Small Schools Project for Nevada has developed, during its initial phase, from an idea into an operational program, a much more comprehensive understanding of the nature of small schools has also developed. Because of the project, and because of the greater degree of understanding of the many problems, it has been possible to explore possible solutions to the "problems of smallness."

We in Nevada feel that many of the "problems of smallness" have, in practical ways, been solved. At the same time, as is noted in the following pages, other problems still remain. It is hoped that, as a result of the efforts of the initial project, the solutions to the remaining problems will be more readily identifiable.

The Western States Small Schools Project has been significant in the Nevada educational scene, and the Department of Education is proud to have been associated with the program.

Burnell Larson
Superintendent of Public Instruction
State of Nevada

Carson City

December, 1966

INTRODUCTION

The State of Nevada has long been concerned about the educational program offered to the children throughout the state. This concern has taken several different approaches during the post-war years, but each approach or effort has been the result of a sincere and genuine concern for the pupils in the public and private schools of Nevada.

Initially, the efforts were aimed toward <u>all</u> of the schools of the state, with little or no regard for a group or groups of schools. Several state-wide surveys, such as the Peabody Study and the University of Wyoming Study, were conducted. In addition, comprehensive surveys of most of the county educational organizations were conducted by the University of Nevada. Each of these surveys was, in effect, an attempt to gain a better understanding of the educational programs and problems of the <u>entire</u> state.

While the surveys were being conducted, and while the results were being tabulated and published, it became apparent to people within the Nevada State Department of Education that not <u>all</u> of the findings were applicable to <u>all</u> schools. It seemed as though there should be some way or ways in which the smaller schools of the state could more adequately meet the needs of the pupils, without becoming "smaller editions" of the larger ones. Mr. Ray McGuire, Curriculum Director, and Mr. Byron F. Stetler, Superintendent of Public Instruction, began to examine what was being done in other states. At the same time, Dr. Elbie Gann, Assistant Commissioner of Education for Colorado, was requested by the Ford

Foundation to survey the needs and abilities of some twenty-eight states with specific regard to small schools.

As a result of the survey by Gann and the exploratory work by McGuire, Stetler, and others, a recommendation was made that five of the western states (Arizona, Colorado, Nevada, New Mexico and Utah) explore the possibility of developing a cooperative plan of action. Such a plan would have as its overall goal the improvement of the educational program of those small schools which must of necessity remain in existence because of geographical or other factors. It was felt initially that the desired improvement might be achieved if the states were to experiment with new and different techniques which might be more uniquely adaptable to and feasible for the small school. It was further felt that the findings of such experimentation could be shared among all of the cooperating states.

Representatives of the five states, including the chief state school officers, met in a series of meetings to work out a plan which would be flexible enough to meet the specific requirements of each of the states. After the plan was developed, it was presented to each of the state boards of education for approval. It should be emphasized that the plan as developed needed to meet the overall goals of the five-state project, and at the same time needed to conform to the separate procedures of the several states. In meeting both of these requirements, the plan as approved was unique.

The plan itself is contained in other documents, and hence need not be repeated here.[1] However, within the framework of the plan, a

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[1]Proposal To The Ford Foundation, Nevada State Department of Education, Carson City, 1961.

cooperative five-state proposal was submitted to the Ford Foundation and subsequently approved.

In the case of the Nevada proposal, the effective date of the WSSSP was January 1, 1962. However, it should be remembered that considerable planning under the leadership of Mr. Ray McGuire had already taken place prior to the date mentioned. Shortly after the effective date, Mr. David L. Jesser was appointed Project Director for Nevada and he, together with Mr. McGuire, began to work on the overall development of the Nevada project.

The planning which took place prior to the effective date of the Nevada project took many forms and directions. Meetings were held with school staffs; other meetings involved administrators from throughout the state. Still other plans were cooperatively developed by staff members of the Curriculum Division of the Nevada State Department of Education. However, at each stage of the initial planning the primary goal was to identify those problems which seemed to be of concern to the smaller schools.

A major concern among the smaller high schools related to the limited (in terms of numbers) staff and the resultant limited curriculum. Closely related to the concern just mentioned was the problem of obtaining teachers with training sufficient to enable them to teach in at least three major areas of the curriculum, as is often necessary in the smaller school.

Among the smaller elementary schools there was a general feeling of concern that it was not possible, under the existing framework of grade levels, courses of study, etc., to do as much as possible for <u>every</u> pupil. Additionally, it was felt that many elementary pupils, if given the

opportunity in terms of time and space, could assume more responsibility for "learning on their own."

The concerns noted, together with others, became the foundation of the original proposal. In it, the State of Nevada (through the Department of Education and the WSSSP) agreed to explore several areas which seemed to relate to the concerns of the schools. At that time, the areas of emphasis were listed as (1) flexible scheduling, (2) reorganization of curriculum content, (3) independent study centers, (4) multiple-class teaching, and (5) the use of supervised correspondence courses. Additionally, an attempt was to be made to identify and assess the value of other recently developed materials and media, such as programed instructional materials, film courses, the tape recorder, non-graded materials, etc. It should be noted that at no time was any thought given to working only in those areas noted; to the contrary, every encouragement was to be given to identification of and experimentation with any technique, material or media which might add strength to the educational program of the small school which must, of necessity, remain in the educational scene.

The report that follows is a description of the various activities which have taken place among the small schools of Nevada during the initial phase of the Western States Small Schools Project.

WORKSHOPS

WORKSHOPS

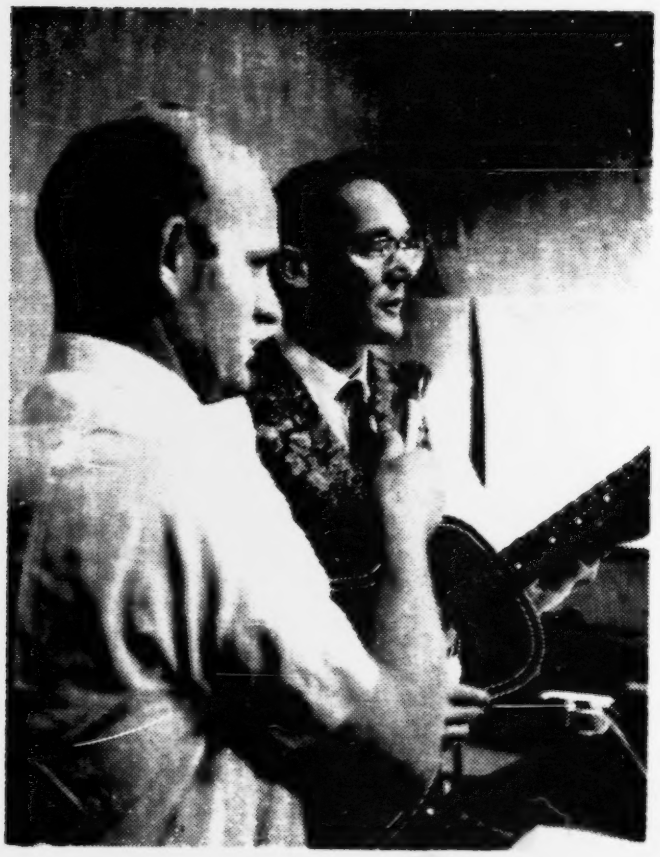
As has been noted elsewhere, a major goal of the Nevada WSSSP has been that of identifying, developing, and exploring ways in which the educational programs of the necessarily existent small schools might be strengthened. In order to proceed in this fashion, it was felt that personnel of the smaller schools should have (and must have) opportunities to learn about what is being done in other areas as well as what might be accomplished in their own.

In other words, it was felt that personnel of the smaller schools should be exposed to a variety of experiences, and that from the exposures, generalizations applicable to their own situations could be formulated. (Obviously, it was hoped that the generalizations could then be developed and implemented within the local school.)

With the preceding purposes in mind, and because of the availability of grant funds, it has been possible to bring personnel from the smaller schools and nationally recognized educational leaders together. Throughout the project this has been accomplished primarily in the form of workshops. (There have been, however, many instances where project personnel have been able to meet with recognized consultants of a more individual basis.)

In a general fashion, the workshops sponsored by the WSSSP for Nevada may be classified into three types or categories, viz., summer workshops, regional workshops, and local (district-wide) in-service workshops. Each type of workshop has been organized for a specific purpose, and each, (in line with the purpose), has been extremely valuable. Tangible results of the first workshop (1962) can be observed in many schools; the same is true of subsequent workshops.

WORKSHOPS



----Science Teachers Learn About Unified Science (Carlin Workshop, 1965)

----Elementary Teachers Learn About Ways of Teaching Music (Summer Workshop, 1965)

1. Summer Workshops

Since the beginning of the WSSSP for Nevada, there has been each year a general summer workshop for teachers and administrators of small schools. The workshops have been of a week's duration, and have been aimed toward the exposure, as it were, to ideas, and to the exploration of ways in which applicable ideas might be adapted and adopted.

The first such summer workshop, held in 1962, involved some twenty-five participants. Since that time the number of participants has grown to about eighty. A total of about 220 participants have been involved in the four summer workshops held to date.

A representative list of consultants or resource people at the summer workshops is as follows:

1962:

FRANK ANDERSON
Director, Western States Small Schools Project for Colorado, State Department of Education, Denver, Colorado

RALPH BOHRSON
General Coordinator, Western States Small Schools Project, State Department of Education, Denver, Colorado

EDMUND FORD
Specialist for Secondary School Organization and Administration, U. S. Office of Education, Washington, D. C.

NOBLE GIVIDEN
Superintendent, First District, Westchester County, New York, Bedford Hills, New York

HENRY KNAPP
Professor of Education, University of Nevada, Reno, Nevada

PHILLIP LANGE
Professor of Education, Teachers College, Columbia University, New York City

EDWARD MEADE
Program Associate, The Ford Foundation, New York City

PAUL NACHTIGAL
Superintendent, West Grand School District, Kremmling, Colorado

FLO REED
Elementary Consultant, State Department of Education, Carson City, Nevada

BYRON F. STETLER
Superintendent of Public Instruction, State Department of Education, Carson City, Nevada

ROY DeVERL WILLEY
Professor of Education, University of Nevada, Reno, Nevada

Multi Media Demonstration
(Elko Workshop, 1963)

1963:

RALPH BOHRSON
General Coordinator, Western States Small Schools Project, State Department of Education, Denver, Colorado

B. FRANK BROWN
Principal, Melbourne (Florida) High School, Melbourne, Florida

MARLENE BUTORAC
Professor of Education, University of Nevada, Reno, Nevada

VERNON EADY
Professor of Education, North Texas State University, Denton, Texas

JAMES FINN
Principal Investigator, Technological Development Project, (NEA; USC)

JAMES HALCOMB
Principal, La Mesa Elementary School, San Diego County, California

Marie Hughes
Professor of Education, University of Utah, Salt Lake City, Utah

ROBERT ISENBERG
Executive Secretary, Department of Rural Education, Washington, D. C.

M. DELBERT LOBB
Assistant Superintendent, Fremont (California) Unified School District

THOMAS TUCKER
Professor of School Administration, University of Nevada, Reno, Nevada

ROY DeVERL WILLEY
Professor of Elementary Education, University of Nevada, Reno, Nevada

1964:

BLAINE W. ALLAN
Principal, Virgin Valley Schools, Mesquite, Nevada

DWIGHT ALLEN
Director, Secondary Education Project, Stanford University

LEONA ADEN
Teacher, Mina Elementary School, Mina, Nevada

RALPH BOHRSON
General Coordinator, Western States Small Schools Project, State Department of Education, Denver, Colorado

DANA DAVIS
Professor of Secondary Education, University of Nevada, Reno, Nevada

J. CLARK DAVIS
Professor of School Administration, University of Nevada, Reno, Nevada

HELEN HEFFERNAN
Chief, Bureau of Elementary Education, California State Department of Education, Sacramento, California

WILLIAM IVERSON
Professor of Education, Stanford University, Stanford California

J. R. KARAS
Teacher, Woodlin Schools, Woodlin, Colorado

MARGARET McCALL
Elementary Supervisor, Harlingen Public Schools, Harlingen, Texas

EDWARD MEADE
Program Associate, The Ford Foundation, New York City

ROBERT MOORE
President, Orange Coast College, Costa Mesa, California

FLO REED
Elementary Education Consultant, Nevada State Department of Education, Carson City, Nevada

DORRIS LEE
Professor of Education, Portland State University, Portland, Oregon

THOMAS T. TUCKER
Professor of School Administration, University of Nevada, Reno, Nevada

ROY DeVERL WILLEY
Acting Dean, College of Education, University of Nevada, Reno, Nevada

STINSON WORLEY
Professor of Elementary Education, University of Nevada, Reno, Nevada

* GERALDINE SILKS

Utilization of Student Talent
Panaca Workshop, 1962

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*Because of a sudden and severe illness, Dr. Silks was unable to participate. Dr. Dorris Lee, Professor of Education at Portland State University most graciously accepted an invitation to participate in the Summer Workshop.

1965:

GERALDINE BERNIER
Teacher, Whitney (Nevada) Schools, Whitney, Nevada

RALPH BOHRSON
General Coordinator, Western States Small Schools Project, State Department of Education, Denver, Colorado

EDMUND J. CAIN
Dean, College of Education, University of Nevada, Reno, Nevada

J. CLARK DAVIS
Professor of School Administration, University of Nevada, Reno, Nevada

JOHN R. GAMBLE
Assistant Superintendent for Instruction, Nevada State Department of Education, Carson City, Nevada

MAMIE HANRAHAN
Elementary Supervisor, Clark County School District Las Vegas, Nevada

PHIL C. LANGE
Professor of Education, Teachers College, Columbia University, New York City

MARGARET McCALL
Elementary Supervisor, Harlingen Public Schools, Harlingen, Texas

FLO REED
Elementary Education Consultant, Nevada State Department of Education, Carson City, Nevada

RICHARD SCHMUCK
Professor of Psychology, University of Michigan, Ann Arbor, Michigan

THOMAS T. TUCKER
Professor of School Administration, University of Nevada, Reno, Nevada

JEANNETTE VEATCH
Professor of Education, Jersey City State College, Jersey City, New Jersey

STINSON WORLEY
Professor of Elementary Education, University of Nevada, Reno, Nevada

Ampliphone Demonstration
(Elko Workshop, 1963)

As can be assumed, the participants in the several summer workshops have had opportunities to learn about, as well as to discuss with outstanding educators, areas such as flexibility in scheduling practices, continuous progress programs, approaches to individualization of instruction, utilization of media, etc. Because of the opportunities noted, the smaller schools of Nevada have changed.

1. Specialized (Regional) Workshops

In addition to the workshops of a general nature, a series of workshops designed to focus on a particular area or field have been held. These have been concerned with areas such as programed instruction, unified science, amplified telephone, modern mathematics, etc. As with the pattern of the summer workshops, recognized leaders in the areas or fields have been together with teachers and administrators. Some of the consultants used in workshops of this nature are:

Dr. Phil Lange	Programed Instruction
Dr. Frank Cyr	Amplified Telephone
Dr. Dwight Allen	Computerized Flexible Scheduling
Mrs. Geraldine Gettman	Individualized Reading
Dr. Victor Showalter	Unified Science
Dr. Edwina Deans	Modern Mathematics

2. Local Workshops

As an integral part of the Nevada WSSSP, local (district-wide) workshops have been held in several of the participating school districts. Workshops of this type have been organized upon request of the local administration, and have been focused on a variety of educational needs. All, however, have been concerned with basic questions relating to ways

of more adequately meeting the needs of the individual.

Within the framework of the local workshops considerable use has been made of personnel of the State Department of Education, including the entire Division of Instruction. Such personnel have included:

JOHN R. GAMBLE	Assistant Supt. for Instruction
FLO REED	Elementary Consultant
ROXIE COPENHAVER	Jr. High Consultant
HERBERT R. STEFFENS	Mathematics Consultant
JOHN H. MAREAN	Science Consultant
PHIL SMITH	Foreign Language Consultant
ROBERT LLOYD	English-Library Consultant
THOMAS S. MURDOCH	Exceptional Pupil Education Consultant

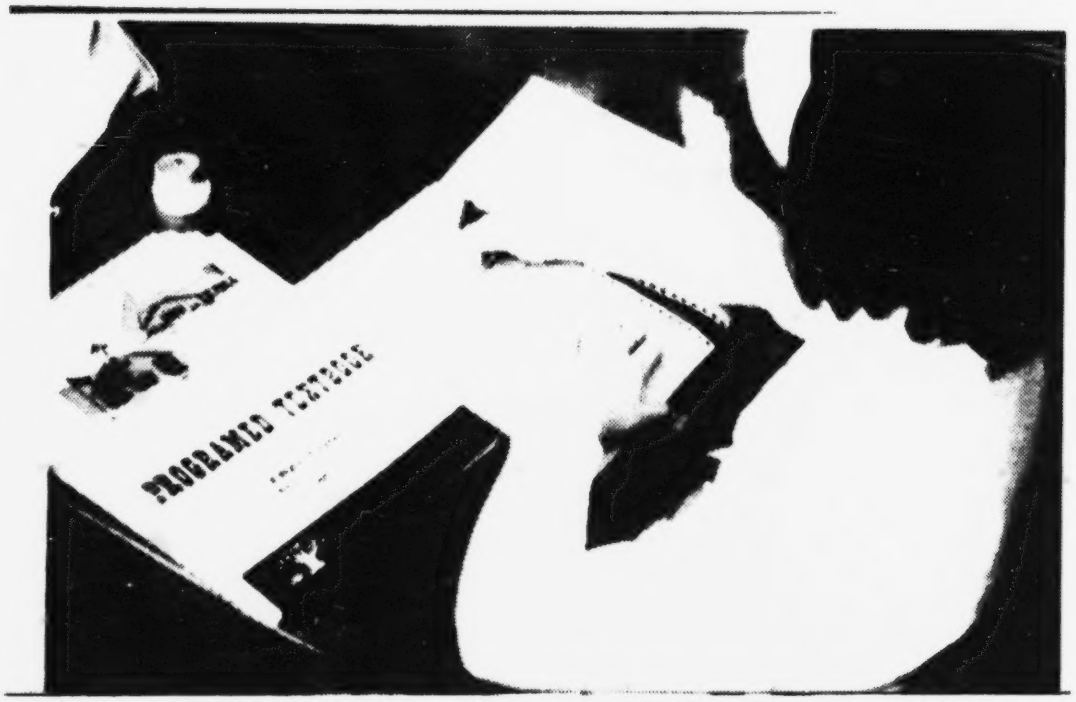
For localized workshops of a specialized nature, much use of personnel from throughout the entire WSSSP has been made, as well as of faculty members of the University of Nevada. Included in this category of resource people were:

J. R. Karas	Woodlin, Colorado
Ralph Bohrson	WSSSP Coordinator
Rowan Stutz	Utah WSSSP
Paul Nachtigal	Colorado WSSSP
John Zuchowski	Arizona WSSSP
John Chavez	New Mexico WSSSP
J. Clark Davis	University of Nevada
Stinson Worley	University of Nevada
Robert King	Meeker, Colorado

In addition to specialized professional personnel such as have been outlined above, every effort has been made to utilize the services of those teachers and administrators of participating schools in which exploratory or experimental measures have met with some degree of success.

Administrators Evaluate
(Elko Workshop, 1963)

SUPERVISED CORRESPONDENCE AND PROGRAMED INSTRUCTION



Students Learn From Programed Instruction

SUPERVISED CORRESPONDENCE AND PROGRAMED INSTRUCTION

While flexible scheduling and multiple-class teaching are effective ways of lessening or removing some of the limitations of smallness as they relate to organizational patterns, they do not have much to offer in instances where the limitations relate to the lack of specialization on the part of the teacher. In other words, small schools are sometimes limited by the fact that teachers lack specialization in all of the necessary areas. In such instances, ways had to be found to overcome the limitation. In the Nevada WSSSP two such ways have been explored.

1. Supervised Correspondence Courses

The use of supervised correspondence couses as a means of enlarging the number of curricular offerings can be one of the most effective of all the methods noted. In this method, the students are enrolled (by the school) in a correspondence course from a recognized institution, such as the University of Nevada, University of Utah, or University of California. The students are then assigned both a regular time and a supervising teacher. In this instance the primary functions of the teacher are to help the student when questions arise, administer tests, and to see that the assignments are sent in with some degree of regularity.

Those who have had experience with this method seem to feel that unless the word, "supervised," is taken in its most literal meaning, the chances of success will be lessened considerably.

While there may be some who would look upon supervised correspondence courses as a form of programed instruction, the fact remains that the two

are not designed for the same purpose. One major difference between the two techniques is the lack of immediate reinforcement in the supervised correspondence courses. There is a distinct time lag between the time when an assignment is mailed in and when it is returned with corrections.

The supervised correspondence courses offer several definite advantages to the school, however. Should there be a student with a need for a course which is not offered, the course can be taken and recognized credit given for it.

Again, based upon the experiences of those schools in which this method has been used, there are some cautions as to procedure, some of which have been mentioned earlier, but will be included here for emphasis:

a. Supervised correspondence courses should be given at a regularly scheduled time during the school day, with a teacher assigned to supervisory duty. (This need not be an individual class, but may well be a "multiple-class" situation.)

b. Only those students having a real and tangible need should be enrolled. The need might well be college preparation, or it could be vocational in nature. In any event, the need should be determined.

c. Students enrolling in supervised correspondence courses might well be expected to pay the necessary enrollment fees themselves, with the understanding that they would be reimbursed by the district upon completion of the course. (This suggestion is offered as a means of having some assurance that the student will complete the work.)

2. Programed Instruction

Generally speaking, the use of programed materials as a means of enriching or enlarging the curriculum is of fairly recent origin, even thought there have been isolated instances of this earlier. Because of the fact that isolated instances of "programing" have been identified as

having been used by people as far back as Socrates, and in order to insure clarity, it should be emphasized that "programed materials", as used here, refers specifically to the recent organized effort on the part of Pressey, Crowder, Skinner and others.

Basically, programs consist of the material to be mastered, much in the same manner as other aids to instruction. However, the "program" exists because the knowledge is broken down into extremely minute steps, with the learner progressing through each successive step. In addition, there are provisions in programed instruction for immediate reinforcement. In other words, a student knows immediately whether his response or reasoning is correct or incorrect.

In some forms of programing the student is told simply that he is right or that he is wrong, as with the so called Skinner, or linear method of programing. In this method, it is felt the student who might respond incorrectly will go back to see why the response was incorrect. However, it should be noted that if programing is properly done, the chances of error (except through carelessness) are quite remote. At the same time, it should be also noted that the student knows at once if his response is correct, and this reward will reinforce the knowledge he has gained.

Examples of the Skinner type of programing can be found in the Temac courses, published by Encyclopedia Britannica Films, the TMI courses, published by Grolier Society, English 2600, published by Harcourt, Brace and Company, and in the Koncept-O-Graph machine, manufactured by the Graflex Corporation. These are but a few of the ever increasing number of Skinner type programs which are appearing.

At the present time the other widely recognized method of programing is that refined by Crowder, which is sometimes referred to as "intrinsic" or "branching." In this method the student is not only informed as to whether or not his response is correct or incorrect, but is also told "why." In addition to finding out "why," the student is directed to another portion of the program which will clarify or correct improper reasoning.

Examples of intrinsic programing may be found in the Autotutor, which was developed for the USAF, and in the Tutortext, which is published by Doubleday and Company. The Autotutor utilizes a program on 35 mm film, while the Tutortext is in effect a "scrambled book."

Recent developments by the Center for Programed Instruction in New York City indicate that still another type of programing may evolve in the form of a combination of the two approaches already mentioned. In the same vein, it should be noted that still other developments may logically be expected to follow.

Within the framework of the Western States Small Schools Project, it was hypothesized that programed materials could be of considerable usefulness to the smaller schools. At the same time, the potential would appear to be equally as beneficial for the larger schools as well. The advantages of this media seem to be fairly numerous for <u>all</u> schools, large or small. A few of the apparent advantages are: (1) curricular offerings may be increased; (2) individual differences may be more adequately met; (3) pupils can be allowed to progress at their own rate; and (4) recognized principles of learning can be used.

On the other hand, there can also be distinct disadvantages, and most of these seem to hinge upon the attitude of the teacher and of the school.

If there is a lack of acceptance by the teacher, then the use of programed materials probably will not be effective. In like fashion, there must be a general acceptance by the school administration. Both of the preceding points indicate one of the greatest disadvantages, i.e., teachers and administrators in general are not familiar with the techniques and concepts of programing and hence are relectant to try programed materials.

Because of the lack of familiarity with the use of programed materials, the WSSSP, in cooperation with the University of Nevada, has sponsored a series of workshops designed to acquaint teachers and administrators with the materials. Additionally, the several teachers using programed materials were participants in a five-state conference at Albuquerque, New Mexico, again designed to further orient them to the materials.

While those schools (including teachers and students) in which programed materials have been used successfully have profited, there still remain a sizeable number of schools and teachers who, for one reason or another, do not accept it as an aid to either teaching or learning.

Should a school be interested in the programed learning, certain guidelines should be established and followed. Based on the WSSSP experiences, some of these might be:

1. A rather comprehensive survey of available materials should be made.

2. An orientation program for teachers and administrators should be developed.

3. Some type of orientation should be given pupils who might use the materials.

4. Advanced programs should be readily available for those students completing a course in advance of the others.

5. Teachers of classes using this method should visit schools where programed materials have been used and should discuss the various aspects of programs with the teachers who have had experience in the use of them.

While there are many references suitable for any person interested in programed instruction, the following might prove to be especially useful.

Jeffs, George, and David Jesser, The Effect of Programed Instruction on the Self-Acceptance of High School Students, Nevada Department of Education, Carson City, 1965.

Lumesdaine, Glaser, et al, Teaching Machines and Programed Learning, National Education Association, Washington, D. C.

_____, The Principles of Programed Learning, TMI-Grolier, New York, 1961.

Markle, Susan, et al, A Programed Primer on Programing, Center for Programed Instruction, New York, 1961.

_____, Programs '62, United States Government Printing Office, 1962.

Report of 1963 Conference on Teacher's Role in Use of Programed Materials, Nevada Department of Education, Carson City.

MULTIPLE-CLASS TEACHING

MULTIPLE-CLASS TEACHING

In another effort to find practical solutions to the problems (or limitations) relating to smallness, several Nevada schools developed and implemented programs built around the idea of multiple-class teaching.

Fundamentally speaking, the concept of "multiple-class teaching" is far from unique. Teachers who have had experience in the old one-room school will readily recognize this as being a technique which they used every day. However, the technique would appear to be frowned upon or ignored by many high school teachers of the present age.

Essentially, the technique calls for the teaching of two or more subjects in the same room, by the same teacher, and within the same block of time. In schools which have already employed this technique, the multiple-subjects taught have been in related areas, with the thought that related subjects contain a core of "common knowledge" which might be taught to all groups at the same time. Following the teaching of the "common knowledge," the groups would break up into their respective classes, and the teacher would give formal instruction to one group while the other groups would engage in independent study or discussion. The teacher would be in the room, and would be available to answer questions from any of the several groups.

Seemingly, in areas where this has been done, more success has been found when related subjects were taught with this technique. However, there have been examples of considerable success in teaching unrelated subjects. In this regard the interest of the instructor, together with his use and knowledge of various teaching media, has no doubt been the success factor.

Early in the project it was hoped that through the use of the multiple-class technique an opportunity for the small school to offer a broader program without appreciably increasing the number of teaching personnel involved would be provided. At the same time, it was hoped that it would permit the small school to schedule more classes within a given block of time; thus lessening or removing one of the major problems or limitations of the small school.

Teachers who have worked with multiple-classes have, for the most part, found them to be both workable and satisfactory. The teachers themselves have noted a much higher level of student interest, which in turn probably results from the fact that students realize their needs are being more adequately met. The end result for the teachers involved has been a more stimulating teaching situation.

It should not be inferred that the use of multiple-class teaching involves merely the placing of an additional teaching load on the teacher. While the method might in some cases be misused in this fashion, experimentation seems to have amply demonstrated the need for rather extensive teacher-preparation, and that this cannot be adequately accomplished unless some time is provided. This factor definitely should be considered when teacher assignments are made involving the use of multiple-class teaching. All concerned (faculty and administration) should have a fairly clear understanding of this need. With such an understanding, the probability of success with this technique would seem to be much greater. It should be explained that the teacher involved might well use time outside of the school day for preparation as indeed so many teachers do, but that the teacher should be aware of what the technique would entail.

As with flexible scheduling efforts, it is difficult to identify every specific instance in which the multiple-class technique has been used. At the same time, however, several schools in which rather extensive use of the technique has been made can be identified. Among these are:

Pahranagat Valley High School
Alamo, Nevada
Mr. David Anderson, Principal

Lincoln County High School
Panaca, Nevada
Mr. George Behunin, Principal

McDermitt High School
McDermitt, Nevada
Mr. Glenn Nutting, Principal

Wells High School
Wells, Nevada
Mr. Roy F. Smith, Principal

Carlin High School
Carlin, Nevada
Mr. Paul Billings, Principal

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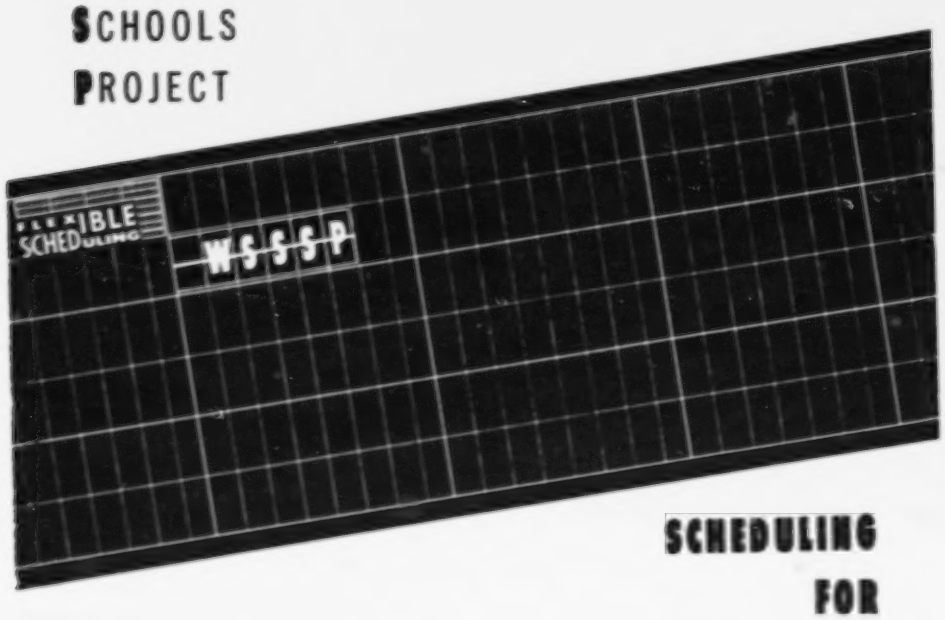
SCHOOLS
PROJECT



SCHEDULING FOR FLEXIBILITY IN SMALL SCHOOLS

FLEXIBLE SCHEDULING

FLEXIBLE SCHEDULING

At the beginning of the Western States Small Schools Project in Nevada a concern shared by most of the necessarily existent small schools related basically to ways in which the smaller schools might offer, as it were, a more "adequate" curriculum. Most of the participating schools perceived this area to be a major importance and expressed a strong desire to attack the problem. As a result, one of the major areas of exploration among Nevada WSSSP schools has been in the general field of flexible scheduling. The hope and expectation, of course, has been that through flexible approaches to the concept of scheduling there might be possible educational programs designed to accomodate the learner.

The concept of flexible scheduling, or of a redesign of the school schedule, has a wide range of possibilities as far as expansion or enrichment of the curriculum is concerned. This approach, in effect, holds to the theory that there is nothing sacred about a rigid schedule in which the pupils meet a specified number of classes every day, at the same time of day, and for the same length of time. Instead, this approach raises rather fundamental questions concerning the fixed type of schedule, such as whether or not it is educationally sound for the biology class, for example, to meet at the same hour each day, or whether it makes sense for the student to spend as much time in typing as in physics. (This should not imply a criticism <u>per se</u>, but should be taken as an example of critical questions which should be answered in terms of sound educational practices.

Just as the possibilities are numerous, the variations are seemingly limitless - - - actually limited only by the imagination or creativeness

of the school staff. By way of illustration, a schedule may be worked out in which certain students (depending on the needs) can spend more time in one class and less time in another. This type of schedule has been termed a "modular schedule," because it is made up of modules of time which are then combined to make up the schedule. In one sense, this type of schedule becomes a rigid-unchanging one, as far as the daily schedule is concerned. It does, however, depart from the traditional approach by permitting students to spend more time in areas requiring more concentration of study, and less time in courses which are "easy" for them.

Within the conceptual framework of the modular schedule, the advent of computer technology has opened, as it were, several new vistas, both in WSSSP schools and others. Through the use of the computer and the techniques developed for this purpose, it has been possible for schools to actually develop a daily schedule that is a product of the curriculum.

Another type of schedule is one which contains a "seven-period schedule" in a "five-period day." This would enable a school to offer a greater number of course offerings with the same number of teachers, and would allow for teaching blocks of longer than traditional length. The basic difference between this and a traditional schedule is that under this type the classes would meet only three or four times per week, and for perhaps seventy minutes at a time. A schedule such as this could be constructed so as to allow for variety, with the schedule itself rotating - - - no daily schedule would be identical with that of the previous day. This approach would utilize the "cycle," with identical daily schedules appearing once a week, or once every three weeks, or whenever the "cycle" is complete.

Should the school be interested in working out a flexible type of schedule, it is suggested that several publications be thoroughly explored. These are:

_____, Scheduling for Flexibility of Instruction, Western States Small Schools Project, Office of the Coordinator, Salt Lake City, 1966.

_____, Guidebook on Flexible Scheduling, State University Teachers College, Oneonta, New York, 1959.

Austin, David, and Noble Gividen, The High School Principal and Staff Develop the Master Schedule, Bureau of Publications, Teachers College, Columbia University, New York, 1960.

Allan, Blaine, Individualized Learning Through Computerized Modular Scheduling, Nevada Department of Education, Carson City, 1965.

Several examples of "flexible schedules" which have been put into practice in Nevada are shown on the following pages.

In addition, a representative schedule of the "inflexible" variety has been included for comparative purposes. Brief explanatory notes are included with the schedules.

1962-1963	Office	Room 7	Room 2	Room 3	Room 1
8:30-9:21	Office	Typing I	Study Hall	Algebra II Trig.	Economics Sociology
9:23-10:14	Superv.	Span. II	Library Science	Study Hall	Health W. Geog.
10:16-11:07	Am. Govt.	Bus. Arith.	Eng. II	Algebra I	Study Hall
11:09-12:00	Superv.	H School G's P.E.	Pub. Spkg. Journ.	Study Hall	Amer. History
1:00-1:45	Study Hall	Bkkg. I	Eng. IV	Phys. Science	World History
1:47-2:37	Superv.	Typing II	Eng. I	Biology	Study Hall
2:39-3:30	Superv.	Study Hall	Drama I	Physics	H School B's P.E.

Example A: Typical Schedule

1	Sociology Psychology	Business Math	Algebra I	Supervised Study
2	Supervised Study	Typing I	Supervised Study	World Problems and Current Affairs
3	----	Public Speaking	Chemistry	American Government
4	Elementary P. E. Tu & Th	Supervised Study	Chemistry Lab. M-W Elementary P. E. Tu & Th	Counseling
5	General Science	English III & IV	----	Supervised Study
6	Health	Supervised Study	Algebra II	Nevada History Commercial Law
7	American History	English I & II	Supervised Study	----
8	H.S. Girls P. E. Tu & Th	---	H. S. Boys P. E M & W	Drivers Training (2nd Semester)

9:00 - 9:45	Period 1	Period 7	Period 6	Period 5	Period 4
9:45 - 10:30	Period 2	Period 1	Period 7	Period 6	Period 5
10:30 - 11:15	Period 3	Period 2	Period 1	Period 7	Period 6
11:15 - 12:00	Period 4	Period 3	Period 2	Period 1	Period 7
1:00 - 1:45	Period 5	Period 4	Period 3	Period 2	Period 1
1:45 - 2:30	Period 6	Period 5	Period 4	Period 3	Period 2
2:30 - 3:15	Period 7	Period 6	Period 5	Period 4	Period 3
3:15 - 4:00	Period 8	Period 8	Period 8	Period 8	Period 8

Example B: Rotating Schedule

In this schedule, the actual schedule of classes is shown on the left-hand side, with the rotation indicated on the right hand side. Period 8, it should be noted, remains constant, and it is during this time that the P.E. and Driver Training activities are carried out.

The schedule shown here has at least two seeming advantages over the more typical schedule: (1) the classes are held at a different time each day; and (2) in most instances the last academic period of one day is offered during the first period of the following day, thus, allowing for rather intensive follow-up activities by the teacher and class. While it is not shown in the illustration, this schedule, in order to gain the most benefit from the idea of the last period being the same as the first period of the following day, should carry right on through into the following week so as to make a seven day cycle.

	1	2	3	4	5	6	7	8	9	10	11
	Gen. Math.	Eng. 2A	Eng. B	Chem.	Type I	A Govt.		Psych.	G. P. E.	Trans. Supervisor	Home Ec.
	Alg. I	Eng. 1A	Eng. R	Phys. Scl.	Eng. C	A Hist.		Guld.	G. P. E.		Home Ec.
	Geom.	W Hist.	Fre. II	Free	Bkkp.	B P.E.		Guld.	A Hist.	Soph. Shop	Home Ec.
	Alg. I	Eng. D	Fre. I	Phys. Scl.	Type II	A. Govt.		Libr.	G P. E.	T & I	
	Alg. II	Free	W Geog.	Chem. II	Short-hand I & II	Free	Chorus	Libr.	W Hist.	T & I	
	Free	Type I & II	Study	Geol.	Yrbk.	B. P.E.	Band	Libr.	Fmly. Lvg.	T & I	

Example C: Rotating Schedule

The above schedule illustrates a way in which a six period schedule may be placed in a five period day. It also indicates the possibility of having half of the schedule fixed, or constant, to allow for vocational training, with the other half (in this instance, morning) rotating.

	1	2	3	4	5	6
1	P. E.	English I	Algebra II	Typing I	World Geography	Speech & Debate
2		Type II / Office Practice	Algebra I	U. S. History	Gen. Math. / Com. Math.	Civics
3	P. E.	French II	Chemistry	Typing I	Economics	Geometry
4	Driver Train. / Soc. Psych. & Libr.	English II	Physics	Typing II	General Science	Journalism
5	Home Ec. / Crafts	English III & IV	Spanish I	Geology	P. E.	Biology I / II
6	Driver Train. / Soc. & Psych.	Shorthand I	Trig.	World History	P. E.	Biology I / II

Example D: Flexible Schedule With Multiple-Classes

In essence, the above illustration is a six-period schedule contained within a five-period day. Each class will meet four times per week (70 minutes each), leaving one "X" period to be used for assemblies, special events, etc.

Included in this schedule are multiple-classes, which are indicated by a diagonal mark (/).

STUDENT: PROWS

STUDENT PROGRAM
Teacher Assignment

SCHOOL: Virgin Valley
YEAR: 1963-64

Pd.	MONDAY			TUESDAY			WEDNESDAY			THURSDAY			FRIDAY		
	COURSE	ROOM	TEACHER	COURSE	ROOM	TEACHER	COURSE	ROOM	TEACHER	COURSE	ROOM	TEACHER	COURSE	ROOM	TEACHER
1				TENNIS 816	SCI					TENNIS 816	SCI		PHYSICS 434	SCI	
2				TENNIS 816	SCI		BIOL 402	Music		TENNIS 816	SCI		PHYSICS 434	SCI	
3	SCI 467	SCI		GSCI 439	SCI		SCI 467	SCI		GSCI 439	SCI		SCI 467	SCI	
4	SCI 467	SCI		PHYS 434	SCI		SCI 467	SCI		GSCI 439	SCI		SCI 467	SCI	
5				PHYS 434	SCI					PHYS 434	SCI				
6				PHYS 434	SCI					PHYS 434	SCI				
7				SCI 407	AUD					SCI 407	AUD		ALG 301	SCI	Section II
8				PHYS 404	AUD					GSCI 409	AUD		ALG 301	SCI	Sec II
9	LUNCH			LUNCH			LUNCH		Sec. I-II	LUNCH			LUNCH		
10	ALG 361	SCI	Sec I-II	BIOL 462	SCI		ALG 361	SCI							
11	ALG 362	SCI		BIOL 462	SCI		ALG 362	SCI		ALG 362	SCI		ALG 362	SCI	
12	ALG 362	SCI		BIOL 462	SCI		ALG 362	SCI		ALG 362	SCI		ALG 362	SCI	
13				BIOL 432	SCI					BIOL 432	SCI				
14				BIOL 432	SCI					BIOL 432	SCI				
15	ALG 301	SSl	Sec. I	ALG 301	SCI	Sec. II	ALG 301	SSl	Sec. I	ALG 301	SCI	Sec. II	ALG 301	SSl	Sec. I
16	ALG 301	SSl		ALG 301	SCI		ALG 301	SSl		ALG 301	SCI		ALG 301	SSl	

Example E: Modular Schedule (Teacher schedule as developed through computer.)

WSSSP SCHOOLS USING FLEXIBLE SCHEDULES

Within the framework of the WSSSP many schools have developed flexible schedules. These are relatively easy to identify. At the same time, however, it should be noted that the concept of flexibility in scheduling has permeated the thinking and planning in many other Nevada schools, and while not so readily identifiable, it does exist.

Among the Nevada schools which have developed and utilized flexible schedules of one form or another are:

Wells High School
Wells, Nevada
Mr. Roy F. Smith, Principal

Carlin High School
Carlin, Nevada
Mr. Paul Billings, Principal

George Whittell High School
Zephyr Cove, Nevada
Mr. William Wright, Principal

Austin High School
Austin, Nevada
Mr. Ronald Byrd, Principal

Lincoln County High School
Panaca, Nevada
Mr. George Behunin, Principal

Pahranagat Valley High School
Alamo, Nevada
Mr. David Anderson, Principal

Virgin Valley High School
Mesquite, Nevada
Mr. Blaine Allan, Principal

McDermitt High School
McDermitt, Nevada
Mr. Glenn Nutting, Principal

SUMMARY

SUMMARY

The preceding sections of this report have described, in some detail, some of the more visible efforts, actions, and results of the Western States Small Schools Project for Nevada.

Of those described activities, the most massive, and hopefully, the most lasting and far-reaching, activity has been in the area of workshops. Over the years, literally hundreds of teachers from the smaller schools have experienced in-service opportunities never before available to them. They have been exposed to the ideas and thoughts of leading educators from throughout the nation; they have in turn had the opportunity to develop their own ideas and thoughts. Some, because of WSSSP activities, guidance, and financial support, have achieved national recognition for their efforts, and have subsequently become leading resource persons for further small school improvement efforts.

With the above in mind, it should be noted that the workshop activities have attained the specific objective of in-service education for teachers and administrators of the smaller schools. At the same time, strong emphasis should be given the serendipitous results, i.e., the role that the WSSSP has played in the development of leaders in small school improvement efforts.

In addition to the specific activities described, considerable effort has been expended toward the attainment of individualized instruction in the smaller schools. Again, this has been a fairly constant goal of the workshop activities, and many teachers have truly implemented systems of individualized instruction in their classroom. But because of the variance among the teachers in a given school, it is difficult to assess or describe

as a single entity. The teachers, however, have written descriptions of their practices, and these have been published by WSSSP under the heading, "Promising Practices."

Still another activity which, because of its highly experimental nature, has not been included in detail is that relating to the use of technological and educational media such as the amplified telephone. Single concept films, and the like. During the initial WSSSP many schools explored the potential of this type of media, and as a result, expressed a desire to use such devices of a more sophisticated level. Consequently efforts of this type have been included in the current WSSSP, and are being reported accordingly.

Another area that should be mentioned deals with the contributions and efforts of the participating schools, which in turn indicate the high degree of cooperation, eagerness, and enthusiasm existent in the schools. While it is true that the major contribution of the schools has been in terms of teacher "time", every participating school has been able to re-allocate budgeted monies for the purchase of materials, equipment, facility modification, etc. In addition, many of the schools have, as a matter of course, assumed the costs of sending teachers to workshops, and to visit other schools. As noted, each of these seems to be a measure of commitment, and at the same time seems to indicate a real desire to continue to pursue those objectives originally established by the Western States Small Schools Project.

The commitment of the local schools and school districts to bring about improvements in the smaller schools reflects also the attitude prevalent within the State Department of Education. Throughout the life

of the WSSSP, members of the staff of the Department (more specifically, the Divisions of Instruction and of Vocational Education) have been intimately involved in project efforts. Again, this has resulted in a very strong commitment on the part of most of the staff members, and will undoubtedly have lasting effects on those smaller schools existing in Nevada.

Young pupils learn about German
(Scheelite School, 1963)

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Read to participants at National Education Association Meeting
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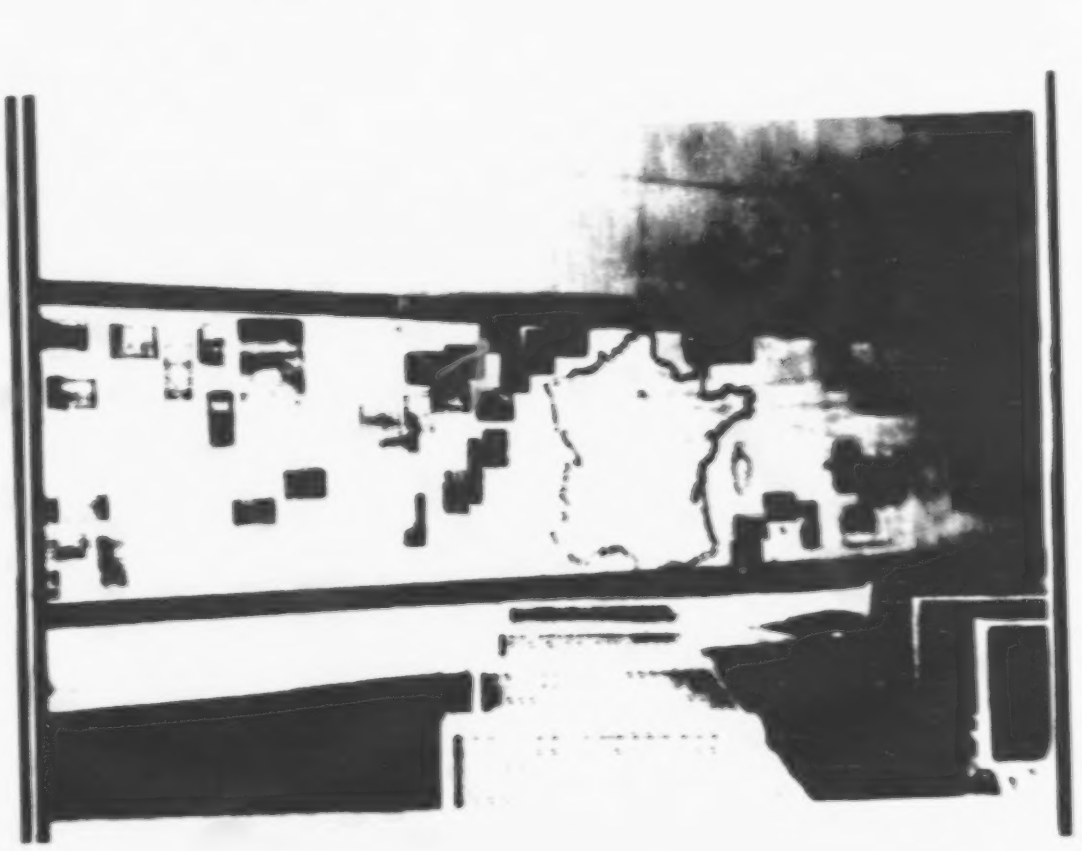

Facilities Promote Individualized Instruction